

# Simplified Business Plan for planning and management - A proposal for the mariculture industry

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management, Organization performance.

**Abstract**— Currently, the planning management of any company linked to the agricultural environment is directly related to the formation and development of market relations. Within this perspective, this work proposed the use of a simplified business plan with the reality of a small producer in aquaculture - production of aquatic organisms. Thus, after the implementation of the proposal, the benefits achieved were: the empirical demonstration of the theory of business plans; providing support for planning reproduction by other producers in this expanding market; and strategic gains for the entrepreneur, who now has a tool that enabled him to design medium and long-term scenarios. It is worth mentioning that this proposal, despite being based on the literature, allows the entrepreneur to review and parameterize it from new horizons. The results of this work can, therefore, help researchers, professionals and entrepreneurs to improve their practices and prescriptions, in addition to providing suggestions for new paths for the development of entrepreneurial methods.

## I. INTRODUCTION

In the present competitive context, the absence of business planning is related to the expressive failure rate among small companies (Mazzarol & Rebound, 2020). This fact can be attributed to the tendency of restrictions in the informational and financial resources of these institutions, raising the urgency of aligning the allocation of resources to the strategic intent of their businesses (Grimmer et al., 2016). Reinforcing this understanding, Grimmer et al. (2018) reflect that the choice of a competitive strategy is one of the crucial business decisions, in order to optimize the distribution and integration of resources.

In this sense, according to Mazzarol (2001) and Mason and Stark (2004), the construction of an effective business

plan consists of a support tool for decision making, in addition to helping corporate dialogue with external stakeholders, such as accountants, bankers and Providers.

However, small companies tend to exhibit lower levels of systematic data collection and statistical analysis, compared to larger companies (Mazzarol & Rebound, 2020). Supply chain power problems and relatively higher operating costs are also recurrent. Nevertheless, many of them are notoriously successful and are in outstanding positions to respond, through innovation, to new market opportunities.

The aquaculture market was chosen for its notorious and emerging importance. Defined as “the creation of fish, crustaceans and aquatic plants”, aquaculture leads the growth ranking among the sectors of world food

production (Ahmed et al., 2019). Due to the rapid growth of the global human population, and the consequent increase in the demand for food, Kobayashi et al. (2015) and Ahmed and Thompson (2019) recommend the productive expansion of the activity, to balance supply chain management.

According to Tacon (2020), world aquaculture production was estimated at 111.95 million tons (Mt) in the year 2017. For comparative purposes, the activity exceeded wild catch fishing by 18.32 Mt, whose production was estimated at 93.63 Mt in the same period. The average annual growth rate of aquaculture is 6.13%, indicating market solidity and a trend of global appreciation in the aquatic organism sector (Tacon, 2020).

According to the Food & Agriculture Organization of the United Nations [FAO] (2021), the practice of Aquaculture differs from wild catch fisheries as it consists of the cultivation of aquatic organisms (fish, molluscs, crustaceans, aquatic plants, reptiles and amphibians). This implies interventions in the reproduction and growth of organisms, such as feeding and fattening, replacement after harvest and protection against predators, with the purpose of increasing production. In addition, wild-catch fishing is the exploitation of an aquatic resource as a common property, with or without appropriate licenses, while aquaculture must be in the possession of organizations such as companies and associations, adds the agency (FAO, 2021).

In Brazil, the number of aquatic farms was estimated at around 233,000 in 2017, as determined by Valenti et al. (2021) and originally published by the Brazilian Institute of Geography and Statistics [IBGE] (2020). In addition, these researchers cite that the volume produced exceeded 700 thousand tons, generating about U \$ 1 billion in gross revenue in the mentioned exercise.

Despite representing 12% of the world aquaculture gross revenue (Tacon, 2020), Oysters, Scallops and Mussels are responsible for only 1.86% of the financial volume produced by Brazilian aquaculture (IBGE, 2020a). This discrepancy may be indicative of the untapped opportunity to commercialize mollusks originating in national cultivation.

At this juncture, a socioeconomic highlight is the predominant small scale on Oyster, Scallop and Mussels farms, of which 50% have an area less than 1 hectare and 92% less than 5 hectares (IBGEb, 2020), which reveals a field in which plans for the expansion of business in the sector can be implemented.

Hopp and Greene (2018) consider that, if the plans are synchronized directly with other related activities, the viability of the risk is more likely. In the opinion of these

authors, the use of business plans in companies that use longitudinal data and, at the same time, control the development of their activities, is beneficial for planning short and medium term scenarios, but this result depends on the time invested in a project. plan and the existence of synchrony between it and the other management activities.

Competitions and competitions, in terms of the market, are dimensions that accurately portray the dynamics of the business environment and, above all, interfere in the life cycle of organizations. Thus, according to McKenzie and Sansone (2019), business plans are being used progressively in developing countries, in an attempt to stimulate entrepreneurship. However, these authors point out that these competitions usually attract competitors with growth prospects higher than the average of companies, because they disregard the use of prior planning that can be adopted and updated during insertion in the segment.

There are many recent studies on the theme of mariculture / aquaculture (Safford et al., 2019, Brown et al., 2020, Ren & Zeng, 2021, Gangnery et al., 2021, Brugere et al., 2021, Wang et al., 2021, Salayo et al., 2021), however, there is no evidence in the literature that focuses on a simplified business plan for planning and management in the sector.

Considering the exposed context, the objective of this work was to carry out a case study, by proposing a simplified business plan, in a small production of Oysters, Mussels and Scallops on the Brazilian coast.

## II. THEORETICAL REFERENCE

In order to adapt to the size of the business and facilitate its reproduction, the theoretical framework of this work followed the simplification of the standard developed by the Brazilian Service of Support to Micro and Small Companies [SEBRAE] (Biagio, 2013). This standard contains the following themes in its structure, which will be detailed in the course of this section: Market Analysis; Marketing plan; Operational plan; and Financial Plan.

In market analysis, understanding the behavior of customers and suppliers is essential. Depending on the discovery by Johnsen et al. (2006), studies on the relevance of interactions with customers have been carried out extensively since the 1970s.

Cooil et al. (2007), in the same line as Henrique and Matos (2015), emphasize that attention to the client's characteristics - such as age group, educational level, income and gender - is decisive in the strategic adequacy of the business. The effect of adapting products and services to the profile of customers can result in satisfaction and loyalty of these users, in addition to

influencing their consumption behaviors. Specifically, obtaining customer loyalty is the target to be achieved and one of the main rewards of this method (Wolter et al., 2017).

Parallel to taking advantage of this opportunity, in allusion to the SWOT Analysis, understanding the competition is a key aspect in the planning and management of an enterprise. As studied by Gur and Greckhamer (2018), competitors can be identified by evaluating potential customers about products and services offered. Therefore, if two companies have solutions that meet the same needs of this audience, they can be considered competitors with each other.

In order to meet the level of service expected by the customer, and to gain an advantage over the competition, the selection of suppliers is an important stage of the process. As described by Cengiza et al. (2017), this component of Supply Chain Management must consider quality, delivery, price and capacity as priority criteria in the decision process among possible suppliers. Thus, structured studies of: technical acceptability of material, gross price, discount rate, net price, special charges, freight charges, total cost to destination, payment terms, scheduling, acceptance of project terms and conditions are recommended, promised delivery date based on the premium, shipping weight and expiration date of the quote (Cengiza et al., 2017).

As studied by Chernev (2020), a company's long-term and sustainable growth comes from planning that guides marketing activities. In summary, a company that does not have a growth-oriented strategy is more vulnerable to threats from its competitors, notes the author.

According to Marjanova et al. (2016), a marketing plan must contain marketing objectives, including product information, sales projection, profits and markets, promotional and advertising strategies, pricing policy, distribution channels, among others, with precise specification of deadlines and responsibilities.

The design of an adaptable and optimized layout is an important field of problems that has been investigated for several decades, say Herra et al. (2018). The parameters for determining solutions can include the analysis of the value flow, the incorporation of external suppliers or even the technical improvement of the employee.

Another aspect with high influence, in determining operational capacity, is the production system chosen: pulled, pushed and hybrid (Pinheiro et al., 2019). The systems are distinguished from each other, especially in decisions regarding the volume and timing of production. The pulled system is based on the client's request, mitigating excess risks, which implies a reduction in the

quantity produced and, consequently, in the costs involved. The pushed systems are characterized by the planning and release of production orders under demand forecasts, in order to guarantee an increase in the availability of products to the customer (Pinheiro et al., 2019).

According to Mazzarol and Rebound (2020), the fundamentals of a plan and financial management are present in the balance sheet accounting reports, income statement for the year and the cash flow statement. Without proper financial management, a modest expansion of finance-based operations can collapse the company's capital structure, even if sales increase. With the balance sheet report, short and long-term assets and liabilities are distinguished, providing the owner-manager with opportunities and restrictions for making assertive decisions, especially long-term ones such as debt.

Also, according to Mazzarol and Rebound (2020), the income statement for the year provides a breakdown of income and expenses for the accounting period, showing details of activities between the balance sheets. Its components make the entrepreneur capable of deriving several established performance metrics and, mainly, reacting to the results found.

The ability to monitor and predict cash flows is critical to the survival of a small business. By facilitating analyzes of the availability, sources and uses of business capital, it allows timely attention to deviations between the planned and realized flows. This operation can be performed by the cash flow report (Mazzarol & Rebound, 2020).

The growth and survival potentials of a small business depend on the owner-manager's expertise in assessing organizational financial performance. Therefore, some other indicators are suggested to improve these assessments.

For Calabrò (2017), break-even analysis has a wide variety of uses as an auxiliary tool for business and project management. It is worth highlighting some notable applications of this analysis, according to Morano and Tajani (2017): the dimensioning of demand and supply of products.; the analysis and definitions of the price policy and its effects on sales; the influence of the financial structure of project costs on the feasibility of the initiative; the comparison and choice between the technical and financial alternatives, the analysis of the stability of the results, as well as of the investment variables, and the effects on the convenience of the operators in investing their resources.

Profitability is also decisive for the performance of a small company (Mazzarol & Rebound, 2020). With it, it is possible to convert the company's value generation into a monitorable index, considering that it consists of the

capital earned from sales after deducting the corresponding costs. This metric is commonly used to compare the contribution of each product in the company.

In turn, El-Halwagi (2017) cites return on investment (ROI) as one of the recurring criteria in decisions about investments in new improvement projects or businesses. Each company must determine an ROI higher than the rate of inflation and interest associated with “safer” investments, to qualify it as viable. This metric weighs the expected return and the investments dedicated to a given action, being constantly indicated in the decision making about the allocation of resources.

### III. METHODOLOGICAL APPROACH

The present work took place in an individual case study format at an Oyster, Scallop and Mussels farm, located in the state of Espírito Santo, Brazil.

In the understanding of Massis and Kotlar (2014), case studies are a research method that facilitates an in-depth investigation of a contemporary phenomenon in real life in its natural context. The case study research allows the exploration of the phenomenon under investigation, from a variety of perspectives, to obtain a balanced image in depth of the same event.

A proposal for the effective conduct of a case study, formulated by Miguel (2007), addressed the following steps: 1 - Definition of a Conceptual-Theoretical Structure; 2 - Planning of the Case (s); 3 - Conducting a Pilot Test; 4 - Data Collection; 5 - Data Analysis and; 6 - Generation of the Research Report.

Klaassen (2018) point out that the case study can, among other features, be used in situations where the main attributes of organizational and administrative processes, changes in general, international relations and business maturity are examined.

Analogous to Morgan et al. (2017) and Ridder (2017) illustrate that the face-to-face interview should be preceded by a research protocol, containing a data collection tool and the behavioral instructions for its application. Thus, the study design was traced; the strategy for carrying out the activities (pre-test, test and final questionnaire); type of data analysis implementation; ethical considerations and responsibilities.

This study considered the Likert scale in the interviews, whose planning methods were subjected to satisfaction assessment based on five points: 1 - Fully meets, 2 - partially meets, 3 - indifferent, 4 - does not partially meet and, 5 - does not meet totally).

Thus, in accordance with Miguel (2007), the Conceptual-Theoretical framework (Stage 1) was determined with the purpose of adapting to the market niche (micro and small companies), since the replicability of the SEBRAE business plan model is facilitated by the wide dissemination of information, compared to recent or sophisticated models.

Sequentially, there was the identification of a small company with potential for growth (Stage 2), whose owner was unaware of the method of building a business plan, but expressed interest in carrying it out. In compliance with the ethical precepts due, it was agreed to compartmentalize the study of the business (before and after) the existence of the simplified business plan.

In Stage 3, the AS IS and TO BE survey was carried out only for the first item (“Market Analysis”), in order to verify the quality of the information and, additionally, test procedures and adherence (pre-test).

Subsequently, corresponding to Stage 4, data were collected regarding all areas of the company, in order to conduct the intended business plan (test).

Stage 5 consisted of assessing the strengths and weaknesses in each area of the business (test). Thus, from the literature, we sought to build a robust planning, easily upgradable in electronic tools and self-explanatory, to the point of diagnosing and promoting the entrepreneur's market advances (final questionnaire).

### IV. RESULTS

In accordance with the established methodological sequence, the evolution of business guidelines that occurred in the organization will be presented. It is worth highlighting the progress achieved with the proposal, which corroborates with the literature, with regard to the tangible and intangible gains in the preparation of the simplified business plan for the entrepreneur.

The presentation of the evolution will take place in a comparative way between the plans before and after the work for each of the macro themes raised in theoretical framework. The development of the business plan occurred in the Microsoft Excel tool, as shown in Figure 1.

Through this research, it was found that, prior to the formalization of the business plan, the entrepreneur's perception of potential customers, in his market analysis, was based solely on a problem of his own: he appreciates the consumption of fresh molluscs and does not find them with the desired ease. In other words, the analysis of the clientele would start only from an extrapolation of a specific feeling (frustration of the difficulty of consuming fresh mollusks) to the market, ignoring its variety of



characteristics, needs and additional ways of generating value.

In contrast, throughout the study and implementation of the business plan, demographic characterization, application of satisfaction questionnaires and monitoring of loyalty were able to determine possible opportunities and threats for gaining market share. Among the insights derived from the deepening of knowledge about the clientele, it is worth highlighting the need for diversification of mollusks to serve larger groups, as well as the increase in the level of service by delivery.



Fig. 1: Business Plan Menu.

The knowledge of the positioning of competitors occurred as a curiosity and was obtained in informal interactions with colleagues and potential customers. That said, no study was devoted to understanding the business's vulnerability to competition.

Throughout the study, new competitors, direct and indirect, were identified. As examples of this characterization, traders of crustaceans, mussels, octopuses and wild-caught squid stand out as indirect competitors.

The selection and contracting of the supplier of seeds for the cultivated molluscs, one of the main suppliers of the business, did not address quality proofs, leading to attempts at cultivation with a low survival rate. As a consequence of inadequate quality, there is an increase in expenses with seeds and losses due to unbalanced production capacity at different stages of management.

At the time of drawing up the business plan, a continuous and quality supplier had already been established. However, from a commercial point of view, objective criteria for quality assessment were defined, as well as a contingency measure plan for selecting substitute suppliers.

The company's marketing consisted of the informal dissemination of products in the nautical environment, frequented by the work team. Lacking any visual identity, the producer promoted the products through photos of the harvests on social networks. There was no methodology for pricing the products.

The business plan caused a price that is automatically adjusted due to cost variations. The resulting price adjustment guarantees the coverage of production costs, still remaining below the significant portion of competitors. Standardized promotional strategies started to be routinely disseminated on official cultivation advertising channels.

With regard to the operational plan, the production system was given in the fully pushed model, leading to losses in the finished product, given its perishability. In addition, post-handling logistical operations consisted of harvesting, moving products, storing in freezers and offering them to potential customers.

The model proposed in the planning relates to a hybrid system, the handling part of which is carried out according to the pushed model, while the harvest, logistics and commercialization are carried out in the pulled model, including the delivery mode.

The company's financial analysis consisted of just two matrices: one for expenses and the other for earnings. Both did not have the capacity to discriminate the period of occurrence of the financial transaction, being informed only the accumulated values.

From the implementation of the business plan, the feeding of financial data and reports was standardized via Microsoft Excel (see financial indicators in Figure 2 - Financial Indicators Pt. 1, and Figure 3 - Financial Indicators Pt. 2).

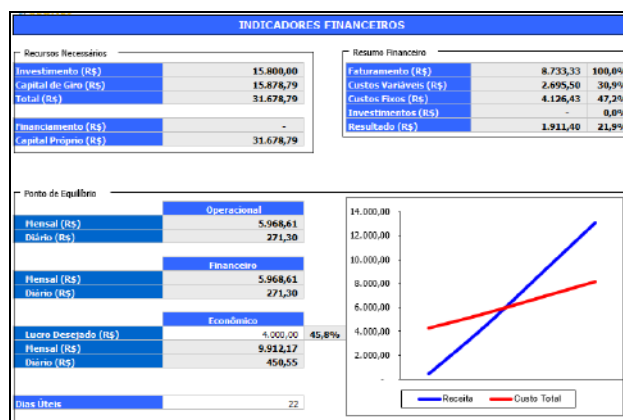


Fig. 2: Financial Indicators Pt. 1.

The business plan, in its entirety, provided the owner-manager with the knowledge that it would be above its break-even point. With that, the security of the return of his effort also brought to the owner-manager the intangible gain of greater enthusiasm, decisive in the success of new ventures.

The business presented 47.2% of its revenue as a fixed cost; 30.9% as a variable cost, 0.0% as a financial cost and 21.1% as a result. Thus, the estimated payback time in a scenario without production expansions was 17 months. However, the low representativeness of variable costs suggests that increases in production may favor the owner-manager.

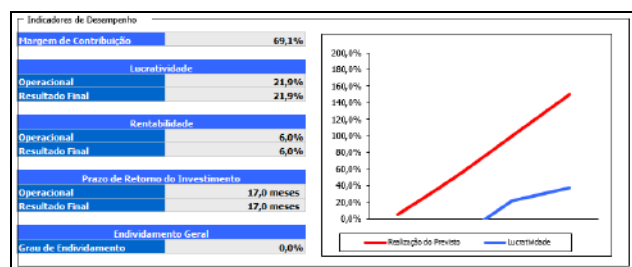


Fig. 3: Financial Indicators Pt. 2.

## V. FINAL CONSIDERATIONS

Planning, regardless of its format, is indispensable for the sustainable development of any enterprise. In this work, a simplified business plan model was adopted, which proved to be able to balance the difficulty of planning and the harvest of good fruits by the owner-manager, in the branch of aquaculture of mollusks.

In order to contribute with the objective of maximizing the value generated to the business stakeholders, the present work sought to standardize the most pertinent analyzes of the literature, in order to shape and facilitate new updates and, simultaneously, maintain the capacity of planning review without burdening the owner-manager in doing so.

Through the aid of research on theoretical frameworks and practical application of the information found, it was possible to generate knowledge for the organization, standardizing the definition of strategies for its strengthening and growth, which enabled it to achieve the objective set for the work.

The benefits achieved were: the empirical demonstration of the business plan theory; providing support for planning reproduction by other producers in this expanding market; and strategic gains for the entrepreneur who owns the farm.

Finally, the plan made it possible to actively integrate the market, not allowing significant unforeseen events or

maladministration to put its production in check, as it translates as a document that characterizes the way of operating, strategies and projections of expenses, revenues and other results. financial resources.

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